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ABSTRACT

This paper prepared at the request of the South African Institute for Librarianship and Information Science develops a scientific definition for librarianship and guidelines for librarians based on that definition. An abridged version of the author's doctoral dissertation, the paper shows that a definition of librarianship is essential for the library profession and for any systematic investigation of library science. The requirements for a scientifically tenable definition are presented and current definitions are classified, tested, and rejected. A new definition of librarianship is formulated to cover all libraries and similar institutions irrespective of time or place. Guidelines for the library profession and for the study of librarianship are also given, and a list of topics to be included in a library science curriculum is provided. An extensive reference list and the author's vita are included. (ESR)

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Librarianship: A Definition

by

Dr. J.G. Meijer

Translated by P.S. Rabie

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ABSTRACT

From the subject literature it is shown that a definition of librarianship is essential for the library profession and for any scientific investigation into it. Once the requirements for a scientifically tenable definition have been established, there follows the classification, testing and rejection of current definitions and the formulation of an accurate definition of librarianship. Finally, with such a definition as a starting point, some guidelines are indicated for the library profession and the compilation of a curriculum for library science.

INTRODUCTION

Searching the extensive subject literature for a generally acceptable definition of librarianship invariably produces no results, despite the fact that librarianship has existed for the past 5000 years or so,¹ and has for approximately a century been the subject of scientific investigation. In order to convey the true meaning of librarianship² and to indicate the advantages of a definition, an attempt has been made to answer the following questions: Is a definition essential for a proper understanding of librarianship? If so, what requirements should a scientifically tenable definition comply with? Is it possible in the light of these requirements to call for general acceptance of a current definition of librarianship? If not, how must a definition then be formulated that will cover all libraries and similar institutions irrespective of time or place and distinguish them from other institutions? Finally, with such a definition as a basis, which guidelines can be indicated for the library profession and for scientific investigation into it?

THE NECESSITY FOR A DEFINITION OF LIBRARIANSHIP

The criticism directed at the scientific study of librarianship bodes ill for the future. According to eminent library scientists, this study has remained in an embryonic stage³ on account of the mentality strikingly described as the "foolish acquiescence in the reduction of librarianship to a technology,"⁴ which has prevented complicated "central questions of the discipline" from being dealt with.⁵

According to critics, it is because of this deficiency that "the goals of professional education...are generally unstated"⁶ and that the subject literature lacks a review of the methods of research that should be implemented, while librarians remain unfamiliar with the objectives, important func-

tions, social status and standards of the profession.⁷ The wider context of library activities is not borne in mind.⁸ The critics also maintain that librarians, who, owing to inadequate scientific training, "lack the scientific attitude," are unable to "act according to fundamental theories or principles" or to adapt to difficult circumstances.⁹ Through their actions, which are generally experimental rather than based on scientific principles, the needs of library users are not adequately catered to.¹⁰ The critics say finally that the average librarian, like "the outdated lawyer or doctor" is working on "an institutional form with a majestic history but without a modern soul."¹¹

With regard to the criticism of experts, it must be said as a matter of urgency that librarianship has yet to take the first step toward discovering the quintessential elements of the profession, has yet to map its native grounds.¹² In the library profession no practical perspectives can, after all, be obtained without scientific foundations. For the sake of the profession, the study of librarianship must develop beyond the embryonic stage. To this end one of the central questions in the scientific study of librarianship will now be dealt with.

A Central Issue in the Scientific Study of Librarianship

The numerous hiatuses that exist in the study of librarianship and the library profession according to the earlier quotations are summed up by John Christ as "the uncertainty and confusion which exist in library science concerning the essence of the library, librarian or librarianship."¹³ In order to clear up this "confusion," the task of librarianship, according to experts, is to determine its *raison d'être*, to form a careful *Selbstbild der Bibliothekare*, "to know itself."¹⁴ It is further remarked that a definition of librarianship is the *conditio sine qua non* for this self-knowledge, i.e., a definition in which "what is unique to librarianship and makes it what it is, differentiating it from all the other forms of human activity," is accurately expressed.¹⁵ A good definition is, therefore, of crucial importance in a scientific study of librarianship. Armed with such a definition, it will then be possible to understand the ultimate objective of librarianship, its most important functions, its place in society, etc., and to decide whether "library science" has a right to existence.

Concept or Definition?

The idea that a definition of librarianship and information practice* can indicate scientific as well as practical guidelines is opposed by those who prefer a concept to a definition. Following the example of social scientists,

Belkin states "that we are not concerned with *definitions* of information, but rather with *concepts* of information." His justification of his preference for a concept begins as follows: "a definition says what the phenomenon defined is, whereas a concept is a way of looking at, or interpreting, the phenomenon." On the basis of this statement he takes the view "that by accepting the idea of a concept one becomes free to look for a *useful* concept, rather than a universally *true* definition."¹⁶ Compared with a "useful concept," Belkin regards a definition that reveals the truth, but says little or nothing about the usefulness of what has been defined, as redundant at the least.

This line of thought is based on the view that a practical or theoretical concept can be formulated for something the limits of which have not yet been defined. Conceptualization is therefore separated from definition. The result, however, is that the conceptualization occurs arbitrarily. The "generation of thoughts," for example, that one person includes in his concept of librarianship and information practice¹⁷ does not belong within the scientific framework of librarianship according to others. In the meantime, neither the inclusion nor the exclusion is scientifically founded, and both are without a proper definition. Different and possibly even contradictory concepts develop in accordance with the views of different library scientists.

In brief, conceptualization of the elements that constitute librarianship is impossible if the elements are not determined by definition. Because conceptualization is one of the essential components of definition, it cannot be compared with definition. Consequently, the replacement of a definition by concept is scientifically unacceptable. The argument so far has been adequate to indicate that a definition of librarianship is essential for the library profession and for any scientific investigation into librarianship.

REQUIREMENTS FOR A SCIENTIFICALLY TENABLE DEFINITION OF LIBRARIANSHIP

Before the various definitions of librarianship can be tested, the right criteria for evaluation will have to be determined.¹⁸

**Information practice* includes everything regarding the information profession, as distinguished from the scientific study of the practice, i.e., information science.

Summary of the True Properties of Definition

In figure 1 the larger circle (bottom line, center) is the figurative representation of the object that is being defined. The shaded sections of the circle indicate the number of true properties that the object has, but not its incidental properties.¹⁹ The true properties, (termed *propria constitutiva* or *attributes* by philosophers), collectively reveal that which distinguishes an object from others, whereas incidental properties (*accidentia*) also occur with other objects. Breathing, for example, is an incidental human property because other living beings, plants and animals, also breathe. In the case of definition by incidental properties or too few true properties, the object is not properly distinguished from other objects, i.e., the definition is too broad.

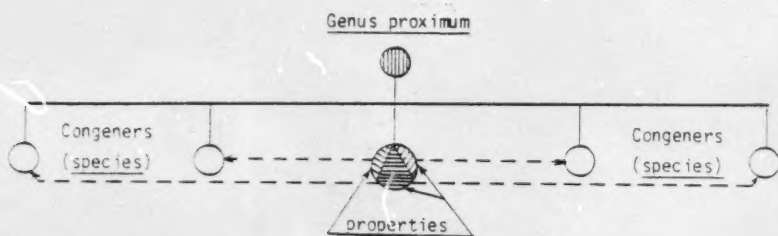


Fig. 1. Graphic Representation of Definition

In contrast with its incidental properties, all true properties of an object belong in its definition. A list of true properties is usually not recommended, as it makes the definition unnecessarily long and detracts from its clearness and impact. However, the definition should combine the totality of the true properties in such a way that it is possible to deduce each separate property directly from the definition. From the above, the first rule for a definition can be adduced: A scientifically tenable definition includes all the true properties of an object. If all these properties are not included, the result is a definition that is too broad—i.e., it does not accurately distinguish the defined object from all other objects. Such a definition is therefore not scientifically justifiable.

Indicating the *Genus Proximum*

The object being defined actually never exists as *Ding an sich*, but always stands in relation to other objects. This relation to other objects reveals its

Sitz im Leben (place in the universe), and is figuratively represented by the top circle in figure 1. A definition typifies what a number of objects have in common by indicating a genus under which the defined object and its related objects (the different species) belong.²⁰

In determining the genus, the definer moves between Scylla and Charybdis. There is the danger of incorrect classification on the one hand, and of vague indication of genus on the other. The latter happens when the object is classified not under the *genus proximum* but under a higher and more distant class. Defining man as a creature, for example, is true, but since it does not distinguish him from other life forms, it is too general and too vague. From this follows the second rule for a definition: A scientifically tenable definition places the object subordinate to the *genus proximum* to which it belongs. If this rule is disregarded, a definition is either inaccurate or vague, and therefore not scientifically defensible.

Distinguishing the Congeners

Apart from the two shaded circles, figure 1 also contains four broken lines drawn from the object that is being defined to its congeners. To enable us to understand its unique place in society, librarianship must be defined in relation to its fellow species, according to Shera, by establishing its specific "characteristics which distinguish [it]...from all other human activities, refined by those properties which differentiate the particular profession from all other professions, making it the kind of profession it is."²¹ In this way librarianship is clearly distinguished not only from genera that differ from its *genus proximum*, but also from its congeners. Otherwise, the defined object is confused with other objects, resulting in a too-wide definition (which includes more than a single object).

On the basis of this, the third rule for definition reads as follows: A scientifically tenable definition distinguishes the object in question from all other objects belonging to the same genus, so that the relevant object is characterized to the exclusion of the other homogeneous objects. If this rule is disregarded, the object is not adequately distinguished from related objects, and a definition that is too broad results.

Summary

To be scientifically tenable, a definition of librarianship should consist of at least three components. The first is an accurate concept definition that includes all its true properties. This is not enough, however, because it does not include anything about librarianship in relation to other objects.

Subordination with regard to the *genus proximum* is the second component, and coordination with regard to the congeners is the third, indispensable component of a definition. If one of the three components is missing, the definition will be incomplete and thus scientifically unsound. Apart from a typifying concept definition, a scientifically tenable definition therefore also contains the classification of librarianship in accordance with Aristotle's dictum: *Definitio fit per genus proximum et differentiam specificam*.²² Equipped with the necessary knowledge regarding the minimum requirements with which a definition must comply, one can test to what extent current definitions of librarianship are scientifically tenable.

TESTING OF CURRENT DEFINING DESCRIPTIONS OF LIBRARIANSHIP

Because of the close correspondence between librarianship and information practice, clear definitions of information practice are included in this paper. Vague definitions, on the other hand, are not discussed.²³

From a survey of the subject literature, it appears that the remaining definitions can be logically divided into three groups. The first group emphasizes a particular part, regarding that as the whole and pronouncing it the essence of librarianship. Consequently, this group of definitions is called *pars pro toto* definitions. Group two emphasizes the wider context of librarianship, and can be briefly described as genus definitions. The third group of definitions is based on the view that librarianship is a conglomerate of heterogeneous components, and is therefore described as heterogeneous component definitions.

***Pars Pro Toto* Definitions**

In the oldest definitions, it is the books themselves that are the most closely associated with librarianship.²⁴ Other definers who distinguish between the form and content of documents (books, etc.) feel that the content is of overriding importance, and accordingly call libraries "repositories of culture."²⁵

As a departure from "book definitions," the essence of librarianship has been sought in the processes of making accessible sources of information and information retrieval* since the rise of information practice during the twentieth century. Proponents of this point of view regard the library as an "information channel" or a "documentation or information center" that is mainly characterized by the manufacture and use of means of opening up

information sources.²⁶ According to Ranganathan, the "reference service is the hub"²⁷ around which all library activities revolve. All these definitions stem from one basic thought—namely, that the processing and/or processes of information constitute the nucleus of librarianship.²⁸

The third group of *pars pro toto* definers concentrates mainly on library users and sees them as being of central importance in the solving of library problems and in the fruitful exchange of ideas on "library science."²⁹ This view is avidly supported by persons behind the Iron Curtain.

Critical Evaluation

However divergent the previous groups of definitions may be, they all show one vital point of resemblance, namely, that each group regards a part of librarianship as the most important and eventually sees it as the essence of librarianship. The advantage of these definitions lies in the analytical descriptions of librarianship which are indispensable for the eventual formulation of a scientifically justifiable definition.

The disadvantage of *pars pro toto* definitions, however, is that only one part, one property of librarianship, is singled out; consequently, the definitions are too broad. Book definitions, while accurately summarizing the attributes of documents (books, etc.), reveal nothing about the institutions that handle books, thereby making no distinction between publishing companies, bookstores and libraries. The same objection is raised against "information process definitions" and "usage definitions." The term *information center* does not distinguish a library from a government department and other bodies that also channel information, and the usage definitions do not distinguish between library users and extra-library readers, listeners and viewers.

The incompleteness of *pars pro toto* definitions is also evident from the fact that subordination to the genus to which the relevant species belongs, as well as coordination with its congeners, is altogether absent. Consequently, the library's place in society is not at all clear.

These objections justify the conclusion that *pars pro toto* definitions do not contain all the true properties of librarianship, do not place it subordi-

*Depending on the context, the term *information retrieval* in the English language refers to either or both, the processes of making accessible (opening-up) and of retrieval (finding-back) of information sources. Because it is important for the purpose of this article to distinguish between the processes of "opening-up" and "finding-back," the term *information retrieval* is used only to denote finding-back or retrieving information sources, while making accessible is indicated by opening-up.

nate to the *genus proximum*, and do not place it in relation to its congeners. These definitions therefore do not comply with any of the three requirements for a scientifically tenable definition.

Genus Definitions

The second group of definitions consists of a number of brief typifications representing the genera under which librarianship is classified. In the subject literature, the following four characterizations occur most frequently.

1. Some experts regard the library essentially as a business or an enterprise, and classify the scientific study of librarianship with so-called library management science.³⁰
2. The second genus under which librarianship is classified originated with Bertalanffy, the inventor of the modern systems theory. Three variations on this theory already exist in the library profession. The first regards every library as a separate system. In the second, the system is the entire "formal social organizational system" that includes all libraries (or, less comprehensively, a network consisting of a number of libraries that are united into a "library organization that is made up of a group of interdependent units"³¹). The third variation describes every library as a separate "subsystem" within the main system, which is the "network of individual library and information systems."³²
3. The next genus under which librarianship is classified is that of "communication agency" or "communication center."³³ As a result of this classification, which is closely related to the typification of librarianship as an "information center," the study of librarianship is regarded as falling within the ambit of the communication or information sciences.
4. A description which, like the three above, enjoys wide support and which also stresses the importance of the user is the definition of librarianship as a "social agency" or a "social institution" and of library science as a "social science."³⁴

Critical Evaluation

Apart from the different genera that they identify, genus definers endeavor to establish the place of the library in society. The merits of the different approaches cannot be decided at this stage, but these brief typifications appear preferable to the *pars pro toto* definitions that emphasize only one property, thereby isolating librarianship from its environment. However, it must be noted as a point of criticism that neither the properties of librarianship nor its coordination in respect to fellow species is taken into

account here. Genus definitions are always too broad because only the genus to which librarianship belongs is accurately (or inaccurately) indicated, and not librarianship itself.

The above criticism gives rise to this conclusion: definitive terms in which librarianship becomes subordinate to a genus exclusively cannot fully express the essence of librarianship, because, contrary to the rules of definition, the properties of librarianship are excluded, and neither is the library distinguished through coordination with its congeners. Genus definitions are too broad by nature, and are therefore scientifically unacceptable.

Heterogeneous Component Definitions

Apart from the *pars pro toto* and genus definitions, there is also a third group of definers who feel that there is no inner relation among the different parts of librarianship. They maintain that librarianship is essential³⁵ a "conglomerate of heterogeneous components."

The idea that libraries have a heterogenous character was originally postulated by the German Georg Leyh and developed by him in the statement that "a central subject is lacking" around which a "library science" can be developed. This view gained ground in Western Europe particularly, and accounts for the fact that, at most European universities, knowledge of librarianship is gained only through the study of a minor subject. In other parts of the world it has been suggested that, for want of a central subject, the study of librarianship be divided among different disciplines.³⁶

There must be an affirmative response to the question as to whether the typification of the library as a conglomerate of heterogeneous components is, in fact, a defining description. After all, proponents of this point of view do not maintain that librarianship has no nucleus but, on the contrary, that it shares several nuclei.

Critical Evaluation

Definers who see a library as a conglomerate of heterogeneous components do so after having made a thorough analysis of library activities, a fact which may be cited as a point in their favor. However, a negative point is that the statement "librarianship lacks a central subject" has been repeatedly made but never proved, which gives rise to the following conclusion: Before it has been irrefutably proved that libraries do indeed lack an essential nucleus, definitions in which librarianship is characterized as a "conglomerate of heterogeneous components," and in which "library

science" is consequently denied the right of existence, are not scientifically justifiable.

The three groups of definitions of librarianship found in the subject literature have been reviewed, and the conclusion is that none of them complies with the requirements for definition. Up to now librarians themselves have not had a clear idea of what librarianship is—and for their sake, and for that of any scientific investigation into the subject, greater clarity must be obtained. In the following pages, therefore, a scientifically tenable definition in the form of a "paradigmatic"³⁷ model will be attempted.

FORMULATION OF A DEFINITION OF LIBRARIANSHIP

The five headings in this section serve to indicate milestones in the development of the argument. To arrive at a scientifically defensible definition, attention is first given to the properties of librarianship, and then to librarianship as an essential unit, in accordance with the rules of definition. The genus under which it falls is subsequently discussed under the heading "The Library is a Cultural Institution." Fourth, there is the coordination with its fellow species, i.e., the library and its congeners, after which it should, in conclusion, be possible to formulate and evaluate critically the definition of librarianship on the basis of data obtained.

The True Properties

In every library, regardless of time or place, a quantity of documents are stored and made available to a narrower or wider group of users. To this end, the collection must be made accessible. Global analysis of librarianship and information practice reveals that they constitute three groups of functions: functions with a view to library collections, their accessibility, and the library users. This tripartition is used worldwide under different descriptions.³⁸ The three groups of functions, which together constitute the true properties of librarianship, will be sketched briefly in order to review the entire field of librarianship.

Functions with a View to Library Collections

The various forms of library documents, ranging from clay tablets to microfilm and even computer data, are of secondary importance to librarians. While museums are primarily concerned with the external appearance of objects, librarians are mainly interested in the content of documents. Documents in a library collectively represent all human

thought in written form, and therefore have a universal dimension.³⁹ Contrasts between people, ethnic groups, outlooks on life, scientific views, etc., are reflected in the documents. Temporary as well as permanent controversies are incorporated in them. Apart from its universal character, the content of library documents therefore also has a divergent character.⁴⁰

Against the background of the vastness of library collections, there are many tasks performed by librarians, tasks which are summarized in the functions: collection and preservation, through which mankind is afforded the opportunity to take cognizance of the views of past and present generations and resulting from this, to guide society on the road to further development (or ruin). However, it is impossible for librarians to collect and preserve every document that is produced.⁴¹ The accumulation of the necessary sources occurs after screening and selection,⁴² a task that should be entrusted to the librarian (in some types of libraries, after consultation with users), even if only to prevent imbalance in the library collection. This function therefore means that the librarian who screens and selects sources also determines what heritage will be passed on to posterity.

With regard to a definition of librarianship, we are thus led to the following conclusions: (1) the library collection must be indicated in such a way that its universal and divergent character is included, and (2) the library's responsibility to determine the extent of the collection through screening and selection should likewise be included.

Functions with a View to Library Users

A collection of documents that is not used--irrespective of its nature--cannot be said to form part of a library. Library users, who have for only a few decades enjoyed the attention of librarians to a lesser or greater degree, form a complex whole. Books, etc., are used, among other reasons, for relaxation, amusement, cultural development (or degeneration), general development, and study and research at schools, technikons and universities. Apart from classification by objectives, users can also be categorized in accordance with other criteria, e.g., religion, education, environment, sex, employment or profession, age. The heterogeneity of the users is further emphasized by their various unspoken reading needs and motives.

In addition, librarians in what is called today's "information-rich and experience-poor culture" work in a society that relies on the accurate and prompt supply of information for right decision-making and scientific and technical development.⁴³ Their task in respect to library users, therefore, is not to adopt an attitude of passive expectancy, but to stimulate use of the library so that everyone's requirements can be met. Because the

influence exercised by books, etc., can be either good or bad, and because the majority of library users require only relevant sources on a subject, the librarian is obliged through reader guidance and reader service to make available not the maximum, but a limited selection of the collection.⁴⁴ These points are sufficient to justify the following conclusion: in a scientifically tenable definition, stimulating the optimal use of library collections should be included as an essential and functional property of librarianship.

Functions with a View to the Accessibility of the Library Collection

The third group of functions characterizing librarianship relates to the librarian's position as an intermediary between the collection and the users.⁴⁵ In this capacity, the librarian is charged with providing either the documents or the relevant sections from them within the shortest time possible. This demand can be complied with first through the thorough opening-up of sources of information, and secondly through effective retrieval of the sources or parts of sources required. As the mass of documents and specialization in different fields of study increase, the need for in-depth indexing and retrieval gradually becomes greater.⁴⁶ A collection that has been made 10% accessible through cataloging, classification, indexing, abstracting, etc., must be classified as 90% merely collection and 10% library. The value of a library is, after all, determined by the accessibility of its collection. The following conclusion is therefore reached: accessibility of its collection is a *conditio sine qua non* of librarianship, and should therefore be included in a definition.

Librarianship: An Essential Unit

After the global analysis, the question arises whether the separate parts together form an essential unit or, in fact, a conglomerate of heterogeneous components that share more than one essence. If the study of the parts shows that each exists independently, then librarianship has a heterogeneous character. According to Eisler, however, if the important functions *miteinander zugleich entstehen...und sich logisch aufeinander beziehen* (develop jointly and simultaneously...and logically relate to each other), so that they cannot really be separated from each other, then the relationship between the whole and its parts is that of an object and its properties.⁴⁷ On analyzing a heterogeneous whole, the finding is therefore that the different units exist on their own independently; while in the case of a homogeneous entity, the different units are meaningless when isolated from each other.

Regarding the functions of librarianship, it is in the first place striking that they developed simultaneously and in close relation with each other.

Upon establishment of a library, the librarian received the instruction to accumulate and preserve documents, to make them accessible, and to provide users with the necessary source material. The relation between these functions is such that they form an inseparable unit. A document without a user is like a letter without an address; and stimulating the use of a document that has not been preserved and that is therefore not available or has not been made accessible, is an instruction that cannot be carried out.⁴⁸

When a finger is amputated, the nerves, muscles and blood vessels are severed, thereby removing the link between finger and hand, and thus between finger and brain. What remains is not a live finger, but a lifeless thing that can no longer function. Approximately the same thing happens when any of the three functions of librarianship is isolated. All that remains are three meaningless functions and a library that has been rendered nonfunctional. On the basis of the above argument, the unproven statement that the library is a conglomerate of heterogeneous components is untenable, and the conclusion is therefore reached that, for the purposes of definition, the functions of librarianship should be regarded as properties of a homogeneous entity.

The Library as a Cultural Institution

So far only a *Ding an sich* has been considered, revealing the most important aspects of librarianship. Nothing has yet been said about its *Sitz im Leben*.

The question regarding the place in society traditionally accorded to libraries is answered first by establishing the genus to which this homogeneous entity belongs, and secondly through carefully distinguishing it from its congeners.

The Universality of Librarianship

It has already been indicated that the collections handled by librarians have a universal and a divergent content. Through library collections, mankind receives a major part of its cultural heritage, containing both positive and negative elements. "The cultural heritage of mankind" is a fitting phrase with which to express the universality and divergencies that characterize library collections, provided that the heritage is limited to the library's part in it (thus excluding other forms of cultural heritage, such as old buildings, archeological finds and museum objects).

Libraries encounter the same universality and divergencies mentioned above in their contact with library users. Coming from different, even conflicting cultural areas and from opposing religious and other groups within a certain cultural area, the divergent user groups represent the whole of society. They come from all levels of the population and from every possible field of occupation. Librarians, collectively responsible for stimulating usage of library collections,⁴⁹ have a truly universal task.

In the light of the abovementioned universality and divergencies with regard to the collection and the users, the main function and the ultimate aim of librarianship becomes evident. The main function of the library is to stimulate people to make optimal use of that part of mankind's cultural heritage preserved in libraries. The aim of this stimulation is *inter alia* to support decision-making and scientific and technical progress (which cannot occur without adequate information) through optimum provision of sources of information—or, to put it differently, to enable society to progress in a positive or a negative sense.

With a view to a definition, the following conclusion is reached: regarding the total collection, all library users, library functions and objectives, librarianship has a universal character. This universality, involving manifold divergencies, should be expressed in a scientifically tenable definition by means of a genus.

Testing of Proposed Genera

The question now arises whether any of the typifications of librarianship that were described as too broad in the earlier discussion dealing with genus definitions, and that were rejected as incomplete, nevertheless reveal the genus of librarianship adequately enough to be accepted as genus in a definition.

The word *agency* that occurs in the terms *communication agency* and *social agency* indicates the position of the librarian as an intermediary between the collection and the users, but does not indicate the task of determining the extent of the collection or the universality of the librarian's responsibility. The latter objection also applies to the concepts *business* and *system*. Although a library is actually a kind of enterprise⁵⁰ and relies on system theorists and business experts for its organizational and administrative well-being, these concepts do not cover its universality; therefore, neither *system* nor *enterprise* can serve as the all-embracing genus.

The descriptions of the library as a "communication center" and "information center" imply that the librarian conveys information, which is not really the case. The *source* of information contains the knowledge, which is conveyed by the author, not the librarian. However, the librarian does enable users to gain knowledge from the sources or parts of sources that he or she retrieves and makes available. Apart from this objection, the universality of librarianship is also left out of account in these concepts, so that the terms *communication center* and *information center* are unsuitable to describe the place of libraries in society.

More appropriate than the above is the characterization of the library as a "social institution," which at least intimates that the task of the library is to render a service to the whole of the society that established it. This term is by far the best of all the defining descriptions tested, because the universality of the library collection, the users, the main function, and ultimate aim are all reflected in it. But however clearly the relation between the library and society is stated, this concept does not indicate the nature of this relationship. Nothing is said about the interdependence of the library and society. As a defining characterization of this interdependence, "social institution" therefore says too little, and is too broad to serve as a concise typification of the genus to which librarianship belongs.

Two conclusions are consequently reached.

1. In a definition, librarianship should be indicated as a *form of enterprise* and, by means of an explanatory statement, also be distinguished from other kinds of enterprises, such as commercial, transport and agricultural enterprises.
2. None of the proposed genus definitions characterizes the comprehensiveness of librarianship accurately enough to be identified as the genus to which librarianship belongs.

The Genus to which Librarianship Belongs

On studying the subject literature, it becomes apparent that there is a close relationship between the library and culture. Experts regard librarianship as "a product of the cultural structure"⁵¹ and refer to a certain "reciprocity of relationship between the library and society,"⁵² a mutual relationship in which the librarians on their part are instructed to "conserve and transmit our culture."⁵³ However, the existing defining descriptions do not adequately reflect the close relation between library and culture repeatedly confirmed in the subject literature. In addition, the authors cited earlier, as well as other authors, do not go into the meaning of the concept *culture* at all.

The word *culture* (which is derived from the Latin *colere*, meaning "to cultivate") in the first place refers to human activities jointly performed, as well as to the spiritual motivation behind the joint activity, and not to the structures created by man (which are included in the concept *social institution*). A spirit, a belief, an ideology are hidden in every cultural endeavor. The strongest motivation to cultural achievement is of a religious nature, and it is therefore not surprising that the words *culture* and *cult* are related. As soon as conflict occurs between the guiding principles of different groups of persons, the question of cultural contrasts arises, characterized by conflicting views on advancement and degeneration. This leads to hostility between groups of persons—for example, between communist states and the free Western world.⁵⁴

Culture, a concept indicating a variety of joint human activities with different incentives, in the second place has a passive meaning. The results of human activities are also called "culture." When cultures are classified according to a period-relative criterion (the Babylonian, Greek-Hellenic and Roman cultures) each reveals the unique spirit of its time. By applying a developmental criterion, more and less civilized cultures are identified. On the basis of human activity, there are scientific, technical, aesthetic, and other cultures, and by territorial division, local, regional, national, and international cultures, such as the Amsterdam, Frisian, French, and Western European cultures.

Briefly summarized, the concept *culture* indicates a totality of joint endeavor, its results, and the spiritual motivation behind the joint activities. Because the motives are often divergent, human groups can develop that are different from each other or in conflict with each other. *Culture*, as described above, is the obvious genus for librarianship for the following reasons.

Librarianship is dependent on cultural activity for its genesis. A library cannot be established in a milieu where thoughts cannot be recorded.

Second, librarianship is dependent on culture for its development. Cultural regression causes libraries to wane, while cultural progress enables them to flourish.

Third, the universality of the library collection and library users is fully covered by the concept *culture*. Joint library collections indeed cover the entire cultural field, and library users come from all cultural groups, while specialized libraries have been established for specific occupations.

Fourth, the interdependency of the library and society is accurately typified by the concept *culture*. It is, after all, on the cultural level that these two interact. Where cultures begin to diverge, there the libraries follow. The librarian in Western society, for example, cannot agree with the propagandistic nature of libraries in the Soviet Union. The influence that is exercised is of a reciprocal nature, for libraries in their turn also leave a cultural impression on society through the collection and preservation of mankind's cultural heritage for library users. Shores had this influencing of the cultural milieu in mind when he wrote about "library leadership for mankind."⁵⁵

Finally, the historical course of librarianship is given with its classification under the genus *culture*. In every contemporary culture it fills its own particular place determined by that culture.

These points justify the conclusion that, in a scientifically tenable definition, librarianship belongs under the genus *culture* and must, therefore, be indicated as a "kind of cultural enterprise."

Librarianship and its Congeners

The genus only indicates what libraries have in common with other cultural institutions, and is therefore inadequate for complete description. Apart from the analysis of its properties and the determination of its *genus proximum*, there is a third prerequisite for defining librarianship accurately, namely, the careful distinguishing of librarianship from other subjects belonging to the same genus. In order to comply with this condition, the difference between librarianship and its congeners will be investigated.

Coded Thoughts: A Scheme of Activities

The collections that librarians jointly build up and hold in readiness for use contain a mixed collection of commendable (as well as harmful) thoughts. Librarians limit their activity in the field of culture to the sphere of human thought. Shera in this regard speaks of "the total knowledge-situation."⁵⁶ Viewed more closely, however, this concept is too unspecific because—to mention only one thing—wordless thoughts and views that are never propagated are inaccessible. On defining librarianship, a large part of the total knowledge situation must therefore still be excluded. The part of human thought important to librarianship consists of those thoughts expressed through codes, such as signals (e.g., smoke signals), number and/or alphabetical symbols, words, musical scores, architectural

drawings, cartographic products, computer printouts, etc., insofar as they have been recorded in documents. Something that has not been recorded cannot be collected, preserved, opened up, retrieved, and made available to users by a library.⁵⁷ It can therefore be seen that the field of activity of librarians falls within the limits of coded thoughts recorded in documents.

For the coordination of libraries with respect to other cultural institutions, it is not necessary to study the whole series of complex activities regarding coded thoughts; a simplified scheme of six activities suffices. After (1) generation, coded thoughts are partly (2) recorded, (3) duplicated, (4) distributed, (5) held in readiness for use, and (6) used. Users who extend the thoughts to which they have been introduced through formulation and expression of new thoughts establish a link between the sixth and the first activity, thereby completing the cycle of activities regarding coded thoughts. The extent to which librarianship is involved in each of these activities will now be discussed.

Coded Thoughts: The Library Action Radius

Within the framework of the scheme outlined above, libraries (as distinct from other cultural institutions) have their own action radius, the range of which is measurable through the careful determination of the part played by librarianship in the six activities mentioned. A number of library scientists feel that the generation of coded thoughts should be included in their field of investigation.⁵⁸ The processes of observing, thinking, knowing, and the forming of thoughts, however, are not subjects about the knowledge content (which is the subject of the theory of science), but rather about the nature and the different ways of human knowledge, i.e., subjects formerly studied in epistemology, the theory of knowledge. Library scientists who, regarding their professional practice, have little or nothing to do with the generation of coded thoughts may as far as necessary borrow from the philosophical theory of knowledge, but are not entitled to annex an important part of this philosophy. The conclusion is reached from the foregoing that librarianship which is not involved in the generation of coded thoughts does not have the right to enter the field of philosophy to lay claim to a large part of epistemology.

With regard to the recording of coded thoughts, librarianship can play an advisory role at best. With the aim of facilitating and accelerating the opening-up of sources of information, authors should be guided on the correct division of subject matter and consistent indexing. After having been recorded in documents, coded thoughts are exclusively a library and archival subject. The documents are selected and, if approved, are included in the collection, preserved, cataloged, classified, indexed, etc., and made

available to users. From this it follows that coded thoughts recorded in documents are an inherent component of library and archive services.

The third activity referred to in the scheme of activities regarding coded thoughts, duplication, was undertaken by libraries before the invention of the printing press. To acquire a book in those days, the book generally had to be borrowed and transcribed. This time-consuming task was mainly performed by monks in a special section of the library called the scriptorium. These scriptoria have since disappeared because of the rise of the modern printing industry. During the twentieth century, libraries have again become involved in the duplication of documents with the aid of reprographic techniques that permit phototechnical reproduction in macro- or micro-format of rare documents and other printed matter. Otherwise, duplication of documents, which is not a typical library activity, is rarely done. Libraries obtain the bulk of their collections from publishers and booksellers. It is therefore justifiable to conclude that libraries do not play an essential role in the duplication of coded thoughts recorded in documents.

Librarianship does not participate in any way in the fourth activity referred to in the scheme of activities, namely, the distribution (through selling, etc.) of documents made available by the publishers. This matter concerns the publishers and booksellers exclusively, and is therefore irrelevant in the indication of the functions and tasks of the library.

Holding in readiness for use, the fifth activity referred to in the scheme, includes almost all the functions and tasks of the library. The screening, selection, collection, and preservation of relevant documents are processes indispensable to the holding in readiness for use of the ever-increasing collection and its contents. Enough has been said for the conclusion to be reached that librarianship is responsible for holding in readiness for use coded thoughts recorded in documents.

Regarding use, the last activity referred to in the schematic review of activities, it has already been established that librarians have the task of stimulating the public's interest in reading and using the library.

Thus, within the mentioned scheme of activities, the action radius of librarianship includes the documentary recording, the holding in readiness for use, and the use of coded thoughts. On the basis of this conclusion, it must be possible to distinguish library and archive services from other cultural institutions and from their own congeners.

Coded Thoughts: The Unique Nature of Librarianship

In order to see the essential difference between librarianship and its congeners, it is not necessary to describe each separate institution and enterprise that belongs to the same genus. When the difference between libraries and other cultural institutions has been clearly indicated with the aid of the scheme of activities regarding coded thoughts, librarianship can be functionally and essentially distinguished from its congeners and its unique nature broadly outlined.

The ellipse in figure 2 represents the scheme of activities regarding coded thoughts described earlier. Museums have been omitted from the different institutions, enterprises, etc., appearing in the diagram because they are not as concerned with the content of documents as they are with the external form of objects that are collected, preserved and displayed. If a definition therefore states that librarianship is particularly concerned with "coded thoughts"—i.e., what has been recorded in documents—this clearly distinguishes libraries from museums, which are almost exclusively concerned with the external appearance of documents and other objects.

On studying figure 2, the difference between librarianship and the business of publishing and selling books is seen at a glance. Publishers and booksellers who reproduce and distribute documents are not responsible for holding the contents in readiness for use; libraries, on the other hand, accept responsibility for the holding in readiness for use of coded thoughts recorded in documents, but are rarely involved in the duplication, and not at all in the distribution, of documents. If a definition therefore indicates that "holding in readiness for use" of coded thoughts is characteristic of librarianship, then these words adequately distinguish the library from the publisher and bookseller.

The view that the library is an educational institution with "education of the people" as its objective has persisted for a long time. As long ago as 1876, Melvil Dewey wrote that "a library is a school, and the librarian is in the highest sense a teacher."⁵⁹ Despite the arguments against this statement, many people have until now summarily accepted and, without scientific justification, defended the identification of libraries with educational institutions in the subject literature without refuting the very real criticism.⁶⁰ According to figure 2, teachers, lecturers, professors and other educators have a task in the generation of coded thoughts.

Apart from relaying the thoughts of other people, educators also relay their own thoughts either orally or in writing (after recording in a document) to

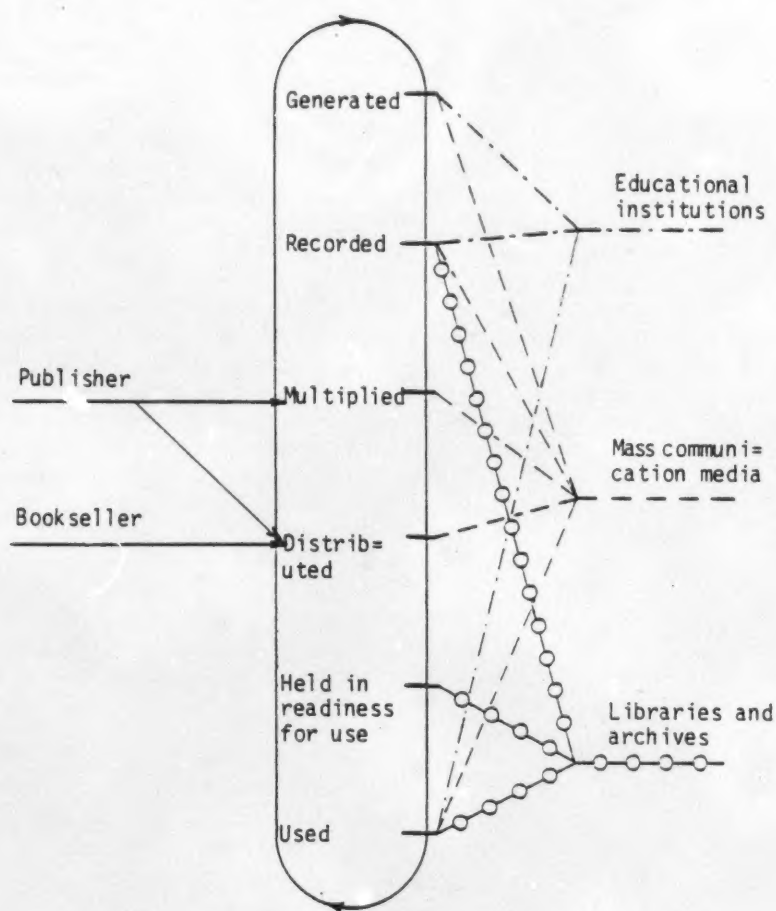


Fig. 2. Activities Related to Coded Thoughts

their students, the users. Libraries do not participate in these activities, but on the other hand ensure that relevant coded thoughts recorded in documents are held in readiness for use, a task with which educational institutions are not burdened. Because of this, there is a functional and essential difference between libraries and educational institutions that is clearly

evident in a definition of librarianship if it states that librarianship "holds coded thoughts in readiness for use."

Libraries are also confused with mass communication media such as the radio, television and the press because of the following reasoning: libraries are responsible for the "transmission," the "transfer of knowledge,"⁶¹ and are therefore institutions within which "communication of knowledge" occurs.⁶² They are consequently *gekennzeichnet durch die Wechselwirkung von Buch und Benutzer* (characterized by the interaction between book and user).⁶³ With all this, more is said than proved and an untenable view is taken. The transfer of knowledge after all does not occur at the moment when a user is handed a document by a librarian, but only afterward, during cognition. The interaction between book and user is a typically extralibrary matter. Librarians and archivists, who functionally and fundamentally share the same task,⁶⁴ enable this interaction by stimulating people to make the optimum use of their collection, but they do not establish any active communication between authors (or their works) and the users. The transfer of knowledge, an extralibrary matter, is therefore not characteristic of librarianship and is wrongly included with library activities. The enormous difference between libraries and mass communication media is evident when they are compared. Mass communication media participate in five of the six activities represented in figure 2. The thoughts produced by them are in many cases recorded in documents, reproduced and circulated in the journalistic world, and relayed to the masses via newspapers, radio and television. Libraries, on the other hand, do not produce thoughts but place them in readiness for use. Therefore, the basic activities of the mass communication media and libraries involve mainly different fields, and it would be wrong to identify the one with the other. If a definition, therefore, states that libraries "hold coded thoughts in readiness for use," then they have been fundamentally distinguished from the mass communication media.

On the basis of the above, it is justifiable to conclude that through the defining terms *coded thoughts* and *hold in readiness for use*, libraries are functionally and essentially different from museums and other cultural institutions, publishing companies, bookstores, educational institutions, and the mass communication media.

The Definition

Formulation

A consideration of the properties of librarianship, its functional and essential homogeneity the genus under which it belongs, and finally its

unique nature compared with that of its congeners (a study briefly described earlier) provides all the components for a definition of librarianship.

It has first been established that in their collections, librarians collectively deal with an all-embracing and extreme⁶⁴ divergent content. The concept *heritage* is appropriate for describing this divergence because it can contain positive as well as negative elements, while the extension to "mankind's cultural heritage" aptly expresses the universality of the content. The phrase "mankind's cultural heritage" is still too broad, however, because apart from library collections, it also includes archaeological findings, old buildings, museum objects, etc. For this concept to be narrowed, the content of the collection should be limited to "coded thoughts recorded in documents." In this description, "coded thoughts" is of major and "document" of secondary importance. Enough has now been said of the first component of the definition, which goes as follows: Librarianship deals with "the cultural heritage of mankind insofar as it consists of coded thoughts recorded in documents."

Secondly, it has been established that with regard to the true properties, a complete summary is not essential and often not even desirable in a definition. However, it must be possible to deduce all the true properties directly from a definition. The function of screening, selection, acquisition, and preservation, as well as the making accessible of the content through subject analysis of sources of information, are included without exception when the definition indicates that the libraries "hold in readiness for use" the cultural heritage entrusted to their care. By neglecting to screen, select, acquire, and preserve, a valuable heritage is lost, and furthermore, a heritage that is preserved but not made accessible is equally unavailable to users. The "holding in readiness for use of the heritage," the phrase that aptly summarizes most of the functions of librarianship, is something that might be expected and demanded by the society through which certain libraries have been established. If librarians do not fulfill their function, the library authorities hold the right to enforce effective corrective measures.⁶⁵ The holding in readiness for use of the heritage is not a self-imposed task of the library profession, but one which is performed at the instruction of the library authorities and for which librarians can be called to account. The second component of the definition can thus be formulated as follows: "The cultural heritage of mankind, insofar as it consists of coded thoughts recorded in documents, is spontaneously held in readiness for use (if librarians carry out their duties) and must be held in readiness for use (by order of the library authorities)."

One function has so far not been taken into account, namely, the main function of librarianship, which is described as "stimulating the optimum use"⁶⁶ of library collections. This phrase contains all the actual and potential actions of librarians in relation to library users, as well as the internal functions already mentioned. A librarian who stimulates the optimum use of his collection will do so by such things as carefully screening, selecting, acquiring, and making accessible documents, in the knowledge that only through holding them in readiness for use with discretion will the optimum use of the cultural heritage be ensured. The third component of the definition, therefore, reflects the main function of librarianship with the words: "stimulating the optimum use of" library collections.

Fourth, the ultimate aim of librarianship is directed at the whole of society, and can be defined as: "in its particular sphere making possible progress (in a positive and/or negative sense) in the cultural life of society," including religion and science. "In its particular sphere" contains a restriction. Other cultural institutions, for their part, also endeavor to make possible the progress of society. Because library users bring about cultural progress through the pursuit of science, decision-making, etc., and the libraries render a service within this framework, the objective cannot extend beyond "making possible" and therefore cannot include the bringing about of cultural progress.

Fifth, it was established that libraries are enterprises in the cultural sphere (the *genus proximum*). Thus, in definition, librarianship can be briefly described as "a form of cultural enterprise."

Finally, it was maintained that libraries are finely distinguished from their congeners if a definition indicates that librarianship "holds coded thoughts in readiness for use."

Expression

When the components are combined, the definition reads as follows:

Librarianship is a form of cultural enterprise whose main characteristic is the stimulation of the optimum use of mankind's cultural heritage insofar as it consists of coded thoughts recorded in documents that are and must be held in readiness for use with the ultimate objective of making possible cultural progress (also in the fields of religion and science) in its particular sphere.

Critical Evaluation

To what extent the formulated definition is scientifically tenable depends on the answers to the following three questions, compiled in accordance

with the rules of definition already established: Are the true properties of the subject included in such a way that they can be deduced directly from the definition? Does the definition contain the genus under which librarianship really belongs? And is librarianship distinguished from its congeners to such an extent that its own nature is described?

With regard to the true properties of librarianship, two of the three major functions are contained in the concept "held in readiness for use." Librarians who hold in readiness for use their part of mankind's cultural heritage must obviously collect and preserve it after screening and selection, and furthermore—to make it really available—make this heritage accessible through the opening-up of sources of information. The third library function, in respect to users, is referred to in the definition by the phrase "stimulating the optimum use." In this way the definition contains all true properties.

It can be said that librarianship itself, which originated from the cultural life of society and depends on its cultural milieu for development, also influences society. It keeps up to date with cultural progress, aims at "making possible cultural progress in its particular sphere," and takes its own position in the clash between culturally conflicting groups. Librarianship is, therefore, thoroughly cultural in character. Consequently, in the words "form of cultural enterprise," the definition contains the appropriate genus under which librarianship falls.

Finally, libraries that hold coded thoughts in readiness for use differ fundamentally from museums and other cultural institutions, such as publishing companies, bookstores, educational institutions and the mass communication media. Consequently, the definition functionally and essentially distinguishes libraries from their congeners.

The proposed definition, which—as concluded from the foregoing—(1) contains the true properties, (2) indicates the *genus proximum*, and (3) distinguishes librarianship from its congeners, may be improved terminologically. However, its content complies with the requirements for definition, is therefore scientifically tenable, and may without fear of contradiction be submitted for scientific evaluation and testing. Whether the definition can be of value to the profession and any scientific investigation into librarianship will be evident from the number of guidelines indicated in the final subsection.

GUIDELINES WITH REFERENCE TO THE DEFINITION OF LIBRARIANSHIP

The formulation of the definition has not solved any of the problems confronting librarians and library scientists, but it has established a basis on which to work in the future. It will suffice to outline here a number of guidelines for the library profession and for the study of librarianship.

Guidelines for the Library Profession

Library Standards and Deontology

One of the serious deficiencies in librarianship which was indicated in the first section of this study is the lack of written and generally acceptable requirements with which librarians should comply. Until generally acceptable standards have been determined, no one will be permitted to identify officially professional shortcomings in the practice as negligence, or to take authoritative action against transgressors. The definition offers a solution to this nonprofessional state of affairs. On the basis of the most important functions, and in the light of the ultimate objective of librarianship, it should be possible after thorough investigation to determine accountable standards, as well as an up-to-date deontology—a contemporary code of ethics in which all the functions and tasks of the library are carefully defined. First, the drafting of standards and of a deontology should be the responsibility of the national associations (preferably, if possible, in close collaboration with research bodies conducting investigations into library science). Second, with a view to collaboration with foreign libraries, international consultation should also take place. It is therefore concluded that the definition of librarianship forms the basis for the determination of tenable standards and a deontology for the library profession.

The Interdependence of Libraries

The state of affairs in librarianship is arousing increasing concern within the profession. According to Baumstark, "*halten die Bibliothekare die auf uns zukommende Wissensexplosion und Informationslawine nicht*" (librarians are unable to cope with the knowledge explosion and avalanche of information with which they are confronted).⁶⁷ The collections, "uncoordinated in growth and usage," according to the National Commission on Libraries and Information Science in the United States, "are in danger of being wasted and inefficiently utilized."⁶⁸ Zaaiman mentions "an almost insurmountable break between the library and the users," and Thompson takes history into account when he declares that "some 'primi-

tive predecessors' were very much more effective in what they did than many of their successors."⁶⁹ This and similar criticism can be reduced to one shortcoming: in the different libraries and library types established on account of the divergence of user needs in a time of specialization, there is generally a lack of vision regarding their fundamental interdependency. (A certain realization of interdependence does exist, but not a clear view of functional and essential interdependency.)

The absolute interdependency of the different libraries is evident from the definition of librarianship. In modern times no single library exists that is able to accommodate mankind's vast library heritage. It is also impossible for this heritage to be made available, according to current user needs, through opening up all sources of information in a single library. With cooperation, time and manpower are made available for large-scale, in-depth and multidisciplinary opening-up of resources.⁷⁰ Where cooperation is refused, the content of the cultural heritage remains largely inaccessible, and libraries, insofar as their collections are not accessible, are reduced to mere repositories of documents.

The interdependency of libraries indicated in the definition of librarianship is fully acknowledged in the long-standing appeal for networks of libraries to be formed. Over thirty years ago, Ranganathan wrote, "Library movement is not the setting up of isolated libraries...[but] an integrated network of libraries."⁷¹ In 1967, Lyndon B. Johnson, then president of the United States, expressed the same view: "I think we must consider new ways to build a great network for knowledge."⁷² To what extent every library in forming a network will be able to retain its organizational and administrative autonomy⁷³ is a question that does not fall within the purview of this article.

Because of conflicting cultures caused by divergent ideologies, and the cold war and hostilities that ensue, the establishment of a worldwide network of libraries is inconceivable. However, the unity of libraries should be embodied through the formation of networks so as to solidify one librarianship within a particular cultural sphere—one large enterprise, as it were, holding in readiness for use mankind's library heritage in such a way that it can be put to optimum use with regard to cultural progress in the broadest sense of the word. It follows that the definition of librarianship consequently contains the functional interdependency of separate libraries with a view to the collection, preservation, and provision of accessibility and availability of the cultural heritage. It is an interdependency that must be expressed through intensive collaboration in order to carry out collec-

tively the instruction that cannot be performed in isolation, namely, to stimulate the optimum use of the cultural heritage.

Guidelines for the Study of Librarianship

The Right of Existence of Library Science

Whether library science has the right of existence has, until the present time, remained a controversial issue. Library science, which has been practiced in the Anglo-American world for approximately a century, is still not recognized and accepted as an autonomous field of study on the Continent.⁷⁴

The only ray of light that emerges from the drawn-out discussion on this issue is in the form of a suggestion made a few years ago by Kouwenhoven, which, however, as far as could be established from the literature, was never followed up. He pointed out the distinction made in the theory of science between the material object and formal object in every autonomous science.⁷⁵ Material objects, such as plant and animal life, mankind, society,⁷⁶ etc., are characterized by their comprehensive content. Through the study of a formal object, in the light of the matching material object, is established what Leyh describes as the spiritual "*Durchdringung und Verbindung mit dem Ganzen*"⁷⁷ that is striven for in every human science. The formal object, which is by nature much more specific than the material object, is formed by a point in reality, an angle from which the material object is viewed by scientists. In this way, "society," for example, a material object, is approached from a different point of view in the "science of law, economics, politicology, sociology"⁷⁸ and in other sciences.

To summarize briefly, the presence of a material and a formal object with the mutual relationship of genus and species is sufficient for the forming of an autonomous science, provided that the genus covers a comprehensive field and that the study of the formal object—the species—cannot occur in an existing science without encroaching on its autonomy.

Applying this concept to our definition of librarianship, we find definite reference to a material and a formal object. In the terms *cultural enterprise*, *cultural heritage of mankind* and *cultural progress*, a comprehensive reality is indicated as the material object of library science. The formal object, the library point of view from which the cultural life is studied, also occurs in the definition when the task of librarianship is described as the "holding in readiness for use" of the cultural heritage and the "making possible of cultural progress through the stimulation of the optimum use" of the heritage. This typical library mandate is so comprehensive and

requires such intensive study of the formal object that it is not possible to burden other cultural fields of study with it without prejudicing their own study programs. This justifies the following conclusion: because its material object is of a humanly universal character and its formal object cannot be incorporated into an existing cultural science without causing disruption, library science has the right of autonomous existence in the cultural sciences.⁷⁹

The Curriculum Bibliothecologiae in Broad Outline

Apart from the material and the formal objects of library science, the definition also contains enough data to give a brief outline of a curriculum for library science. A broad knowledge of the cultural heritage is a prerequisite for the purposeful collection and preservation of mankind's cultural heritage insofar as it consists of coded thoughts recorded in documents. This knowledge is supplied by library cultural science. The preserved heritage must subsequently be held in readiness for use by being made accessible. The "patefaction" of the content (Latin: *patefactio* = making accessible) is the concern of library patefactology,⁸⁰ a subject field consisting of two parts—(1) the theory of opening-up (Latin: *clavis* = key), and (2) the theory of retrieval or heuristics—which can be indicated as library claviology and library heuristics, respectively. In the third subject field, library reader science, the prospective librarian receives instruction in "stimulating the optimum use" of the cultural heritage. The library, described as an enterprise in the definition, is studied from an operational point of view in library business science. Historical investigation inevitably also forms part of library cultural science, patefactology, reader science and library business science. To prevent fragmentation of the general picture, all the historical details in the history of librarianship should be united into a whole. Finally, the definition indicates the fundamental unity of the various library functions and tasks, as well as the objective of "making possible cultural progress" through the library. In view of this unity, it is recommended that introduction to library science be instructed as the sixth (and logically, the first) subject field.

In these six subject fields, the following topics, among others, should be studied.

Introduction to Library Science

1. The relation between the different subject fields of library science;
2. The relation between library science and other fields of study;
3. The method(s) for investigation into library science;
4. Standards and deontology for library science and for the professional practice;
5. Legislation regarding the library profession.

The History of Librarianship

1. Description of the history of librarianship against the background of the advancement of knowledge;⁸¹
2. Evaluation of librarianship on the basis of its objectives during different periods;
3. Description of librarianship's task in a historical perspective.

Library Cultural Science

1. Theory of science providing a review of all fields of knowledge;
2. The unity and multidisciplinary nature of the fields of knowledge;
3. Different divisions of the fields of knowledge, as well as the underlying preconceptions;
4. The relation between the advancement of knowledge and culture (e.g., effects of specialization on cultural life);
5. The principles of library screening and selection;
6. Methods of preservation of different forms of documents.

Library Pathefactology

1. Library claviology—
 - a. principles and methods of cataloging and classification and micro-indexing,
 - b. technical aids for opening-up;
2. Library heuristics—
 - a. principles and methods of retrieval,
 - b. contact surfaces of library cultural science and reader science.

Library Reader Science

1. Principles for the determination of reading needs, motives, behavior, etc.;
2. Predispositions influencing the choice of reading matter, e.g., religion, sex, age, sociocultural milieu, etc.;
3. Reader guidance and service;
4. Methods of stimulating optimum use of the collection.

Library Business Science

1. Theoretical investigation into the organization and administration of libraries;
2. Evaluation and coordination of library activities.

This list, naturally, is not a complete *curriculum bibliothecologiae*. It is sufficient, however, to indicate that, on the grounds of the definition, extension and development of library science is essential.

With reference to the guidelines indicated earlier the hope is expressed that this definition of librarianship—if it is found generally acceptable after scientific testing—may serve to give momentum to library science and to

modern librarianship, the unique cultural enterprise in the service of cultural progress.

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4. Foskett, D.J. "The Contribution of Classification to a Theory of Librarianship." In *Toward a Theory of Librarianship*, edited by Conrad H. Rawski, p. 169. Metuchen, N.J.: Scarecrow Press, 1973. Also compare Yelland, M. "Research in Librarianship." In *British Librarianship and Information Science, 1966-1970*, edited by H.A. Whatley, p. 318. London: Library Association, 1972. And for a similar criticism on information science see Wersig, Gernot. *Information, Kommunikation, Dokumentation*. Munich: Verlag Dokumentation, 1971, p. 16; and Harmon G. "Information Science: Education and Training." *Annual Review of Information Science and Technology* 11(1976):370.
5. Christ, John M. *Toward a Philosophy of Educational Librarianship*. Littleton, Colo.: Libraries Unlimited, 1972, p. 11.
6. Belzer, Jack, and Brown, James W. *Needs for Improvement of Professional Education in Library and Information Sciences*. New York: Syracuse University, 1973, p. 4.
7. Pflug, Günther. "Die Bibliothek der Zukunft als Ausbildungsaufgabe der Gegenwart." *Zeitschrift für Bibliothekswesen und Bibliographie* 18(1971):235; Line, Maurice B. "Ends and Means: Librarianship as a Social Science." *Library World* 66(May 1965):272. Compare Christ, *Philosophy*, pp. 12, 17, 39-40; and Lock, R.N. *Library Administration*, 3d ed. London: Crosby, 1973, p. 46.
8. Taylor, R.S. "Curriculum Design for Library and Information Science." *Education and Curriculum Series* 1(1973):59. Compare: Foskett, D.J. "Some Sociological Aspects of Formal Systems for the Communication of Knowledge." In *Problems of Information Science...*, edited by A.I. Chernyi, p. 57. Moscow: All-Union Institute for Scientific and Technical Information, 1972; and Shera, Jesse H. *The Foundations of Education for Librarianship*. New York: Becker and Hayes, 1972, p. 209.
9. Williamson, "Research," p. 140; Zaiman, R.B. "Die implikasies van Professionalisering...vir Biblioteke." In *Referate...Bloemfontein*, 1975, p. 136. Bloemfontein: SALA, 1975; and Wasserman, Paul. *The New Librarianship: A Challenge for Change*. New York: Bowker, 1972, p. 9.
10. Christ, *Philosophy*, pp. 21, 17.
11. Harlow, Neal, et al. "Introduction: Administration and Change." In *Rutgers Graduate School of Library Service. Administration and Change*, p. 4. New Brunswick, N.J.: Rutgers University Press, 1969 (compare Wasserman, *New Librarianship*, pp. 6, 18).
12. Rawski, Conrad H. "Introduction." In *Toward a Theory*, p. 49. Compare Goldhor, Herbert. "The Future of Education for Library and Information Services." In *Toward the*

Improvement of Library Education, edited by Martha Boaz, p. 114. Littleton, Colo.: Libraries Unlimited, 1973; and Ontario Council on Graduate Studies. Advisory Committee on Academic Planning. *Perspectives and Plans for Graduate Studies*. Toronto: Council of Ontario Universities, 1972, p. 6.

13. Christ, *Philosophy*, p. 39.

14. McDiarmid, E.W. "Scientific Method and Library Administration." In *Reader in Library Systems Analysis*, edited by John Lubans and Edward A. Chapman, p. 95. Englewood, Colo.: Microcard Editions, 1975; Kissel, G. "Einführung." In *Bibliothekswissenschaft: Methoden der Analyse und Gestaltung*. Cologne: Greven, 1973, p. 7. See also Vorstius, Joris. "Bibliothek, Bibliothekar, Bibliothekswissenschaft." *Zentralblatt für Bibliothekswesen* 63(May-June 1949):179; and Shera, *Foundations of Education*, p. 350. Also compare Clark, Robert L., Jr. "The Setting." In *Archive-Library Relations*, edited by Robert L. Clark, Jr., p. 20. New York: Bowker, 1976.

15. Shera, Jesse H. *Knowing Books and Men; Knowing Computers, Too*. Littleton, Colo.: Libraries Unlimited, 1973, p. 113. See also, for example: Kluth, Rolf. "Gibt es eine Bibliothekswissenschaft?" *Zeitschrift für Bibliothekswesen und Bibliographie* 17(1970):231; Eichler, Ferdinand. *Bibliothekspolitik am Ausgange des 19. Jahrhunderts*. Leipzig: Harrassowitz, 1897, p. 22; Predeek, A. "Die Bibliothekswissenschaft als Disziplin..." In *Aus der Welt des Buches: Festgabe zum 70. Geburtstag von Georg Leyh*. Leipzig: Harrassowitz, 1950, p. 174; Kouwenhoven, A.O. "Bibliothekswissenschaft." In *Nederlandse bibliotheekproblemen*, edited by W. de la Court, et al., p. 131. Amsterdam: Buijten and Schipperheijn, 1967; Harlow, Neal. "Changing the Curriculum." *Journal of Education for Librarianship* 10(Fall 1969):78; and Krieg, Werner. *Bibliothekswissenschaft: Versuch einer Begriffsbestimmung*. Cologne: Greven, 1970, p. 4.

16. Belkin, N.J. "Progress in Documentation: Information Concepts for Information Science." *Journal of Documentation* 34(March 1978):58.

17. Shera, *Foundations of Education*, p. 109v.v.

18. For various interesting particulars, such as the distinction between *definiendum* and *definiens*, nominal and real definitions, formal requirements definitions should comply with, too wide and too narrow definitions, see Meijer, "Over de essentie," pp. 34-36.

19. Compare Eisler, Rudolf. *Handwörterbuch der Philosophie*. Berlin: Mittler, 1913, p. 153.

20. See, for example: *ibid.*; and Nobis, H.M. "Definition." In *Historisches Wörterbuch der Philosophie*, vol. 2, edited by Joachim Ritter, p. 32. Darmstadt: Wissenschaftliche Buchgesellschaft, 1972.

21. Shera, *Foundations of Education*, p. 348 (cf. p. 350).

22. See Menne, A. "Definition." In *Handbuch philosophischer Grundbegriffe*, vol. 1, edited by Hermann Krings, et al., p. 271. Munich: Kösel-Verlag, 1973.

23. For the essential unity of librarianship and information practice, see Meijer, "Over de essentie," pp. 42-53. (For vague definitions, cf. pp. 53-57.)

24. For the definitions of Arnim Graesel and Victor Gardthausen, among others, see: Kouwenhoven, "Bibliothekswissenschaft," pp. 119-20; Bostwick, Arthur E. "The Love of Books as a Basis for Librarianship" (1907). In *American Library Philosophy*, edited by Barbara McCrimmon, p. 23. Hamden, Conn.: Shoe String Press, 1975; Leidinger, G. "Was ist Bibliothekswissenschaft?" *Zentralblatt für Bibliothekswesen* 45(1928):147; Vorstius, "Bibliothek," pp. 175-76; Kirchner, J. *Bibliothekswissenschaft: Buch und Bibliothekswesen*. Heidelberg: C. Winter, 1951, p. 3; and Richhardt, R. "Die Bibliothekswissenschaft in den östlichen Volksdemokratien." In Krieg, *Bibliothekswissenschaft*, p. 55.

25. Eichler, Ferdinand. *Bibliothekswissenschaft als Wertwissenschaft...* Graz: Leuschner & Lubensky, 1923, p. 11 (cf. p. 16). For the criticism on Eichler's point of view and the typification of "library science" as "polihistorical science," see von Harnack, A. "Bibliothekswissenschaft als Wertwissenschaft." *Zentralblatt für Bibliothekswesen* 40(Dec. 1923):530. See also: Thompson, C.S. "Do We Want a Library Science?" (1931). In *Landmarks of Library Literature, 1876-1976*, p. 112; Irwin, Raymond. *Librarianship: Essays on Applied Bibliography*. London: Grafton, 1949, p. 64; Beals, Ralph A. "Education for Librarianship." *Library Quarterly* 17(Oct. 1947):297; Leyh, Georg. *Die Bildung des Bibliothekars*. Copenhagen:

Munksgaard, 1952, pp. 39-40; Shores, Louis. *Library Education*. Littleton, Colo.: Libraries Unlimited, 1972, p. 10; Molnar, Pál. "The Conception and Interrelation of Bibliography and Library Science." *Libri* 18(1968):28; de Vleeschauwer, Herman J. "Ambiguities in the Present-Day Library." *Moussion* 36(1960):57; Coetzee, P.C. *Die historiese biblioteekkunde: sy plek en omvang*. Pretoria: Universiteit van Pretoria. Dept. Biblioteekkunde, 1972, p. 8; and Malan, Stephanus I. "Library and Information Science: Educational Issues." *Moussion* II(1, 1973):28.

26. Neubauer, K.W. "Benutzerforschung." In *Theorie und Praxis*, p. 296 (compare Kluth, Rolf. *Grundriss der Bibliothekslehre*. Wiesbaden: Harrassowitz, 1970, p. 42, in which the library is described as "eine Einrichtung, die Informationem speichert, kanalisiert und wiederum mitteilt."); and Loosjes, Theodoor P. *Over Kwaliteit en Kwantiteit in de Documentaire Informatie*. Deventer: Kluwer, 1970, p. 4.

27. Ranganathan, Shivali R. "Library Work: Its Hub, Foundation, and Purpose." *Library and Information Science* 9(1971):27 (cf. p. 33).

28. See, for example, Malan, Stephanus I. *Die biblioteek en die Inligtingwese: 'n Algemene Inleiding*. Durban: Butterworth, 1978, p. 28.

29. See, for example: Drtina, Jaroslav. "Einige kennzeichnende Wesenszüge des sozialistischen Bibliothekswesens." *Zentralblatt für Bibliothekswesen* 73(Oct. 1959):305; Firsov, Georgij G. "Die bibliothekarische Ausbildung in der UdSSR." *Zentralblatt für Bibliothekswesen* 87(May 1973):271; Schmidt, W. "Die Bibliothekswissenschaft in Deutschland in Vergangenheit und Gegenwart." In Krieg, *Bibliothekswissenschaft*, p. 30; Kunze, *Grundzüge*, p. 80; and Neenan, Peter. "Development of Library Education Programs in the Two Germanies Since 1945." In *A Search for New Insights in Librarianship*, edited by William L. Williamson, p. 41. Madison: University of Wisconsin Library School, 1976.

30. See, for example: Joost, Siegfried. "Vernachlässigte Grundsätze..." *Bibliothek und Wissenschaft* 1(1964):60; Krabbe, Wilhelm, and Luther, Wilhelm M. *Lehrbuch der Bibliotheksverwaltung*. Stuttgart: Hierseman, 1953, contents page, p. 2; von Kortzfleisch, Hermann. "Die Bibliothek als Betrieb..." *Zeitschrift für Bibliothekswesen und Bibliographie* 19(1972):202; Lohse, G. "Bibliothekar-Bibliokrat." In *Bibliothek und Buch in Geschichte und Gegenwart*, edited by Otfried Weber, pp. 140, 144. Munich: Verlag Dokumentation, 1976; Fuchs, Hermann. *Bibliotheksverwaltung*, 2d ed. Wiesbaden: Harrassowitz, 1968, p. 6; Kunze, Horst. *Bibliotheksverwaltungslehre*. Leipzig: Harrassowitz, 1956, p. 63; and Knapp, Patricia G. "The Library as a Complex Organization." In *Toward a Theory*, p. 473.

31. Malan, "Die Biblioteek," p. 119 (cf. Kissel, "Einführung," p. 5). See also: McClellan, A.W. *The Reader, the Library and the Book*. London: Clive Bingley, 1973, p. 118; Heidtmann, Frank. *Zur Soziologie von Bibliothek und Bibliothekar*. Berlin: Deutscher Bibliotheksverband, 1973, pp. 385-86; Blasingame, Ralph, and DeProspero, Ernest R., Jr. "Effectiveness in Cooperation and Consolidation in Public Libraries." *Advances in Librarianship* 1(1970):198; Kunze, *Grundzüge*, p. 71; and Mookerjee, Subodh K., and Sengupta, B. *Library Organization and Administration*. Calcutta: World Press, 1972, p. 46. For distinctions in the systems theory and differences in opinion as to what belongs to this theory and what does not, see Meijer, "Over de essentie," pp. 71-72.

32. Boshoff, M.C. *Die Algemene Sisteemteorie as Uitgangspunt by die Beplanning van 'n...Opleidingsprogram*. Pretoria: Van Schaik, 1977, p. 4. Also compare Kemp, D.A. *The Nature of Knowledge: An Introduction for Librarians*. London: Clive Bingley, 1976, p. 143.

33. Shera, *Foundations of Education*, p. 107 (see also pp. 135, 193); and Boaz, Martha. "Library Education." In *Toward the Improvement of Library Education*, p. 5. See also: Kluth, Rolf. "Bibliothekswissenschaft als Kommunikationswissenschaft." In Krieg, *Bibliothekswissenschaft*, p. 123; and Viljoen, A.J. "Die Opleiding van Personeel vir Biblioteek-en Inligtingswerk..." Ph.D. diss., Potchefstroom, 1973, p. 410.

34. Wilson, Louis R. "The Next Fifty Years" (1936). In *Landmarks of Library Literature, 1876-1976*, p. 82; Ranganathan, Shivali R. *Library Manual for Library Authorities...*, 2d ed. Bombay: Asia Publishing House, 1960, p. 21. See, for example, Landheer, B. *Social Functions of Libraries*. New York: Scarecrow Press, 1957, p. 110; and Nitecki, Joseph Z. "Public Interest and the Theory of Librarianship" (1964). In *American Library Philosophy*, p. 173; and Mukherjee, Ajit K. *Librarianship: Its Philosophy and History*. Bombay: Asia Publishing House, 1966, p. 20.

35. Grunwald, W. and Krieg, W. "Die Bibliothekswissenschaft in Lehre und Forschung." In Krieg, *Bibliothekswissenschaft*, p. 156. See, for example, Geh, H.P. "Berufsbild und Ausbildung des Bibliothekars." In Kehr, *Theorie und Praxis*, p. 233.

36. Leyh, *Die Bildung*, pp. 89-90, 91; also compare Goldhor, "Future of Education," pp. 112, 116; and Malan, Stephanus I. "Die Opleidingseenheid in Universiteitsverband." *Mousaion* 11(2, 1974):132.

37. For the concept "paradigm," see Kuhn, Thomas S. *The Structure of Scientific Revolutions*, 2d ed. Chicago: University of Chicago Press, 1970; and for "paradigm" with regard to the study of librarianship, see Meijer, "Over de essentie," pp. 16-19.

38. For worldwide division of librarianship and information practice on the basis of the three functions, see Meijer, "Over de essentie," pp. 47-50.

39. For a more detailed discussion, see *ibid.*, pp. 84-85; and for different descriptions and typifications of the humanly universal content, see, for example: Butler, Pierce, "Librarianship as a Profession." *Library Quarterly* 21(Oct. 1951):247; Kochen, Manfred. *Some Problems in Information Science*. New York: Scarecrow Press, 1965, p. 62; Coetzee, *Die historiese*, p. 3; Klotzbücher, A. "Benutzerforschung." In *Bibliothekswissenschaft und öffentliche Bibliothek*, p. 63; National Commission on Libraries and Information Science. *Toward a National Program for Library and Information Services*. Washington, D.C.: USGPO, 1975, p. x; Thompson, James. *Library Power: A New Philosophy of Librarianship*. London: Clive Bingley, 1974, p. 7; Kunze, *Grundzüge*, p. 14; Leyh, Georg. *Aus vierzig Jahren Bibliotheksarbeit*. Wiesbaden: Harrassowitz, 1954, p. 181; Geh, "Berufsbild," p. 236; Shera, *Foundations of Education*, p. 51; and for the unity and interdependence inherent to all objects, see Meijer, "Over de essentie," pp. 87-89.

40. For contradictions in and divergence of the library collections, see, for example: Ehlers, Dirk L. "The Role of the Library in the Communication of Information." *South African Libraries* 39(Dec. 1971):181; Kochen, *Some Problems*, p. 152; and Meijer, "Over de essentie," pp. 89-92.

41. See, for example: Leyh, *Die Bildung*, p. 184; Woods, Rollo G. "The Future of Library Techniques." In *Prospects for British Librarianship*, edited by K.C. Harrison, p. 91. London: Library Association, 1976; Gray, John, and Perry, Brian. *Scientific Information*. London: Oxford University Press, 1975, p. 3; Parker, E.B. "Who Should Control Society's Information Resources?" In *Information for Action*, edited by Manfred Kochen, pp. 22, 30. New York: Academic Press, 1975; Lohse, "Bibliothekar," pp. 134-35; and Shera, Jesse H. *Introduction to Library Science*. Littleton, Colo.: Libraries Unlimited, 1976, p. 51-52.

42. The distinction between library screening and selection is not studied here (e.g., the complex matter of "relevance" is at issue with these functions). For a short discussion as well as literature on relevance, compare Meijer, J.G. *Toegankelijkheid van Inligtingsbronnen van 'n Groep Geesteswetenskaplike Navorsers*. Pretoria: Human Sciences Research Council, 1980, pp. 103-04, note 14; and for the description of what is relevant ("significant to mankind"), see Shores, Louis. "A Philosophy of Librarianship." *Library and Information Science* 9(1971):41.

43. Taylor, "Curriculum Design," p. 60. For more particulars and literature, see Meijer, "Over de essentie," pp. 95-98.

44. See Meijer, "Over de essentie," pp. 98-99.

45. For different terms through which this intermediate position is indicated and a critical discussion, see *ibid.*, pp. 101-02.

46. See, for example: Tellenbach, Gerd. "Die wissenschaftlichen Bibliotheken..." *Zeitschrift für Bibliothekswesen und Bibliographie* 6(1959):189; Shera, *Knowing Books and Men*, p. 72; Laisiepen, Klaus, et al. *Grundlagen der praktischen Information und Dokumentation*. Munich: Verlag Dokumentation, 1972, pp. 6-7; and Meijer, *Toegankelijkheid*, pp. 74-76.

47. Eisler, *Handwörterbuch*, p. 135.

48. For the essentiality of each property in librarianship, see Meijer, "Over de essentie," p. 106.

49. See, for example: Tyler, Ralph W. "Educational Problems in Other Professions." In *Education for Librarianship*, edited by Bernard Berelson, p. 38. Chicago: ALA, 1949; Harri-

son, K.C. *The Library and the Community*. London: Deutsch, 1963, p. 9; and Boaz, *Toward the Improvement of Library Education*, p. 14.

50. For proof of the statement that the library is an institution, a business, see Meijer, "Over de essentie," pp. 104-05.

51. Shera, *Introduction*, pp. 13, 42. See, for example: Thompson, James. *A History of the Principles of Librarianship*. London: Clive Bingley, 1977, p. 204; Coetzee, *Die historiese*, p. 4; Karstedt, Peter. *Studien zur Soziologie der Bibliothek*. Wiesbaden: Harrassowitz, 1954, p. 37; and de Vleeschauwer, Herman J. "Library Science as a Science." *Mousson* 37(1960):34.

52. Shera, Jesse H. *Foundations of the Public Library*. Chicago: University of Chicago Press, 1949, p. 248. See, for example, Sauppe, "Bibliothekswissenschaft," p. 13.

53. Thompson, *Library Power*, p. 110. See, for example: Vorstius, Joris. *Grundzüge der Bibliotheksgeschichte*, 6th ed. Wiesbaden: Harrassowitz, 1969, p. 1; Broadfield, A. A. *Philosophy of Librarianship*. London: Grafton, 1949, p. 54; and MacLeish, Archibald. "Of the Librarian's Profession" (1940). In *Landmarks of Library Literature*, p. 20. (For the historical significance of the library function of preservation, compare Meijer, "Over de essentie," pp. 110-11.)

54. For a more detailed discussion of and literature on the concept of culture, see Meijer, "Over de essentie," pp. 116-20.

55. Shores, *Library Education*, p. 9 (see also p. 16).

56. Shera, *Foundations of Education*, p. 118.

57. The statement that "non-documentary sources of information such as experts may not be overlooked" is put forward but not proved. For this statement, compare Boon, J.A. *Enkele Perspektieven in die Ontsluiting van Inligtingsbronne*. Johannesburg: Randse Afrikaanse Universiteit, 1979, p. 5.

58. Proponents put forward the following subjects: (1) "generation of knowledge" (compare Weinberg, A. "Science, Government, and Information." In *The Growth of Knowledge*, edited by Manfred Kochen, p. 40. New York: Wiley, 1967; Weisman, Herman M. *Information Systems, Services, and Centers*. New York: Becker and Hayes, 1972, p. 12; and Wellisch, Hans. "From Information Science to Informatics." *Journal of Librarianship* 4(July 1972):158); (2) "origination of information" (Taylor, Robert S. "Professional Aspects of Information Science and Technology." *Annual Review of Information Science and Technology* 1(1966):19, 25; compare Brookes, B.C. "Robert Fairthorne and the Scope of Information Science." *Journal of Documentation* 30(1974):152); (3) "intellectual creation" (compare Foskett, D.J. "Progress in Documentation: 'Informatics.'" *Journal of Documentation* 26(Dec. 1970):345; and Brookes, "Robert Fairthorne," p. 147); (4) processes of "thinking, reflecting, imagining, etc." (Neelameghan, A. "Systems Thinking...." In *Information Science: Search for Identity*, edited by Anthony Debons, p. 140. New York: Dekker, 1974. Also compare Harmon, Glynn. "Information and Metaenergy." In *Perspectives in Information Science*, edited by Anthony Debons and William J. Cameron, p. 93. Leyden: Noordhoff, 1975, on thought processes regarding "metaenergy or one of its forms"); (5) different "cognitive processes" (Brookes, B.C. "A New Paradigm for Information Science?" *The Information Scientist* 10(Sept. 1976):108; compare Farradane, J. "Towards a True Information Science." *The Information Scientist* 10(Sept. 1976):96); (6) "process of conceptualization" (Farradane, J. "Practical Aspects of Information Science and Technology." *Annual Review of Information Science and Technology* 6(1971):404); (7) "nature and function of language" (Gray and Perry, *Scientific Information*, p. 45); and (8) Shera's "social epistemology" (for the content thereof and vague indication of concept, and for the poor argument in the statement that generation of coded thoughts should be studied in library science, see Meijer, "Over de essentie," pp. 125-26).

59. Dewey, Melvil. "The Profession" (1876). In *Introduction to Librarianship*, 2d ed., edited by Jean Key Gates, pp. 240, 241. New York: McGraw-Hill, 1976.

60. See, for example: Dantoni, J. Periam. "Plea for a Philosophy of Librarianship" (1934). In *American Library Philosophy*, p. 83; Wilson, Louis R. "The Objectives of the Graduate Library School." In *New Frontiers of Librarianship*, p. 19. Chicago: University of Chicago, Graduate Library School, 1941; Asheim, Lester E. "The Professional Role of the Librarian" (1959). In *Of, by and for Librarians*, edited by John D. Marshall, p. 167. Hamden,

Cona: Shoe String Press, 1974; Kaplan, Abraham. "The Age of The Symbol." *Library Quarterly* 34(Oct. 1964):297; Mukherjee, *Librarianship*, pp. 18, 20; Harlow, Neal. "Designs on the Curriculum." In *Education for Librarianship* (Monograph No. 11), edited by Herbert Goldhor, p. 4. Urbana: University of Illinois Graduate School of Library Science, 1971; Christ, *Philosophy*, p. 116 (compare pp. 73, 74, 76, 77, 84, 115, 146); Thompson, *History*, pp. 94-98, 216; and Malan, *Die biblioteek*, pp. 20, 24, 36, 38, 41, 48. For the doubt, denial and arguments over the association of librarianship with educational institutions and how this criticism is disregarded, see Meijer, "Over de essentie," pp. 131-33.

61. For these and similar descriptions, compare: Giuliano, Vincent E. "The Relationship of Information Science to Librarianship." *American Documentation* 20(Oct. 1969):344; Laisiepen, et al., *Grundlagen*, p. 15; Wersig, Gernot, and Neveling, Ulrich. "The Phenomena of Interest to Information Science." *The Information Scientist*, 9(Dec. 1975):134; and Shera, *Introduction*, p. 49.

62. See, for example: Shera, *Knowing Books and Men*, p. 96; Mukherjee, *Librarianship*, p. 17; and Gates, *Introduction*, pp. 111-12. (See also reference 33 above.)

63. Levh, *Aus vierzig Jahren*, p. 145. Also compare: Kunze, Horst. "Zur Vorbereitung einer internationalen Konferenz über Gegenstand und Methoden der Bibliothekswissenschaft." *Zentralblatt für Bibliothekswesen* 75(1961):106-07; Vorstius, *Grundzüge*, p. 1; and Shera, *Foundations of Education*, p. 49.

64. See Meijer, "Over de essentie," pp. 134-36.

65. The U.S. government, e.g., with a view to the improvement and intensification of library information services, established the National Commission on Libraries and Information Science, granting it certain powers but also imposing certain obligations.

66. "Stimulating optimum use" is an improvement on the "promotion" of optimum use proposed earlier (see Meijer, "Over de essentie," p. 140), because "promotion" refers to a positive result, a result that cannot be achieved by librarians.

67. Baumstark, T. "Bücher, Bibliothek und Futurologie." In *Bibliothekarbeit heute: Beiträge zur Theorie und Praxis*, edited by Gerhart Lohse and Günther Pflug, p. 3. Frankfurt am Main: Klostermann, 1973.

68. National Commission on Libraries and Information Science, *Toward a National Program*, p. 1.

69. Zaanman, R.B. "Nuwere Ontwikkelinge op die Gebied van die Gespesialiseerde Biblioteek...." In *Nuwere Ontwikkelinge op die Gebied van die Biblioteekwese en Inligtingsvoorsiening*, edited by H.C. Van Rooy and A.J. Viljoen, p. 128. Potchefstroom: Potchefstroomse Universiteit for CHO, Dept. Biblioteekkunde, 1969, and Thompson, *History*, p. 10.

70. For the unity and the relationship of the different sciences making multidisciplinary opening-up necessary, compare: Snow, C.P. *The Two Cultures: And a Second Look*. Cambridge: University Press, 1965; and Kesting, J.G. "Toward a Holistic Concept of Knowledge." In *Perspectives in Information Science*, pp. 181-96.

71. Ranganathan, Shiyali R. *Preface to Library Science*. Delhi: University of Delhi, 1948, p. 148.

72. See Becker, Joseph, and Olsen, Wallace C. "Information Networks." *Annual Review of Information and Science Technology* 3(1968):289.

73. Some regard network-forming as cooperation in which each participating party remains organizationally autonomous while others support "some integration of staffing" (compare Stevens, Charles H. "Governance of Library Networks." *Library Trends* 26(Oct. 1977):219, with Sewell, P.H. "British Librarianship in the Next Decade." In *Librarianship in Britain Today*, edited by W.L. Saunders, p. 144. London: Library Association, 1967). A third group advocates complete organizational integration (see, for example: Dedijer, Stevan. "Knowledge Industry in the Third World." In *The Interactive Library*, edited by Stephan Schwartz, p. 88. Stockholm: Swedish Society for Technical Documentation, 1975; Markuson, Barbara E. "Library Networks: Progress and Problems." In *The Information Age*, edited by Donald P. Hammer, p. 35. Metuchen, N.J.: Scarecrow Press, 1976; Heidmann, *Zur Soziologie*, p. 311; and Günnel, Peter, et al. *Zur Rationalisierung der Bibliotheksarbeit*. Berlin: Humboldt-Universität, 1972, p. 222.

74. For the reasoning against the right of existence of library science, and for inaccurate definition of the concept "science" compare Meijer, "Over de essentie," pp. 159-61.

75. Kouwenhoven, "Bibliotheekwetenschap," p. 131.
76. This summary is given by Becker, H.A. *Sociale methodologie: inleiding tot de werkwijze van de sociale wetenschappen*. Meppel: Boom, 1974, p. 19.
77. Leyh, *Die Bildung*, p. 16.
78. Becker, *Sociale methodologie*, p. 19.
79. For the pure and applied character of library science or the necessity for theoretical and practice-oriented study, see Meijer, "Over de essentie," pp. 156-59.
80. For the conceptual and historical justification for the choice of the concept "patefaction," see *ibid.*, pp. 164, 168.
81. For more detailed justification for the instruction to describe library history against the background of the development of knowledge, see Meijer, J.G. "Periodisering van de Westerse Bibliotheekgeschiedenis." Master's thesis, Unisa, 1977, pp. 71-92.

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